

Optical Fiber Twig Tree

BACKGROUND OF THE INVENTION

1.Field of the Invention

The present invention relates to a more particularly an optical fiber twig tree
5 that combines a plurality of plastic optical fiber bundles with a stand structure and
the plastic optical fiber with an illuminating structure.

2.Description of the Prior Art

In general, a prior-art decorative tree has decorative leaves built on a stand,
and traditional serially connected lamps wound around the whole tree structure if
10 light is needed. However, the traditional setup has its shortcomings of being
overheated bearing a risk of fire accidents, and increasing the cost due to the
blinking light bulbs. The decorative tree of this sort definitely brings the safety
concern to public places.

Summary of the Invention

15 The primary objective of the present invention is to provide an optical fiber
twig tree that combines a plurality of plastic optical fiber bundles with a stand,
wherein the plastic fibers are wound along the branches of the stand and fixed to
the main branches of the stand, such that the plastic optical fiber bundles are
disposed on the whole structure and constitute an optical fiber twig tree. The
20 product manufactured according to the invention adopts the plastic optical fiber
bundle having a super side light, which gives the illuminating effect and is light in
weight. Therefore, the stand can be made by a light-weighted plastic material
instead of the traditional metal material. As a result, the overall structure is
pleasing to the eyes, elegant, light in weight, easy-to-move, and easy-to-store.

Such product can be used as a decoration in any necessary site.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1-1 is a view of combining the plastic optical fiber bundle, branch stand, and main stand according to the present invention.

5 FIG. 1-2 is an illustrative view of the branch stand according to the present invention.

FIG. 2-1 is a cross-sectional view of the plastic optical fiber bundle according to the present invention.

10 FIG. 2-2 is an illustrative view of the illuminating structure according to the present invention.

FIG. 3 is an illustrative view of the plastic fiber bundle being fixed onto the branch stand according to the present invention.

FIG. 4 is a view of a preferred embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The present invention discloses an optical fiber twig tree 1' which comprises a plurality of plastic optical fiber bundles 3 and a stand structure 1, wherein the stand structure 1 comprises: a main stand 12 and a branch base 11 as shown in FIGS. 1-1 and 4. The branch stand 13 as shown in FIG. 1-2 comprises a main branch rod 131 and a branch rod 132 each on both sides, a hook 133 disposed at the end of the main branch rod 131, and the hook 133 hooks into a screw 111 in the branch base 11, such that the branch stand 13 can adjust its angle freely as shown in FIG. 3. The main branch rod 131 of the branch stand 13 comprises a plastic optical fiber 31 winding along the main branch rod 131 or the branch rod 132 according to their shape, and tied into a fixed position by a tie. Further, FIG. 2-1 shows the cross-sectional view of the plastic optical fiber bundle 3. In FIG. 2-2, the plastic optical fiber bundle 3 is coupled with an illuminating structure 2; wherein the illuminating structure 2 comprises an illuminating member 21 and a plastic tube 22, and the illuminating structure 2 is electrically coupled to a power cable 23 for supplying the electric power to illuminate the illuminating member 21, such that the plastic optical fiber bundle 31 as shown in FIG. 3 will produce a side light 311 and an extremity light 312.

Please refer to FIG. 4. In the figure, a plurality of branch stands 13 is fixed on the end surface of the main stand 12 to constitute a stand structure 1, and a plurality of plastic optical fibers 3 is fixed onto a plurality of branch stands 13 and the plastic optical bundle 3 is coupled to the illuminating structure 2 to produce the side light and extremity light effects for the optical fiber twig tree 1'. The product manufactured according to the invention can be used as a decoration in any desired site.